

Pioneer

PLASMA DISPLAY

PDP-V401

Operating Instructions

Thank you very much for purchasing this PIONEER product.
Before using your Plasma Display, please carefully read the "Safety Precautions" and these "Operating Instructions" so you will know how to operate the Plasma Display properly.
Keep this "Operating Instructions" in a safe place. You will find it useful in the future.

About the installation of this product:

The Plasma Display is to be installed by a professional with sufficient technical skill. Please have a company specializing in equipment installation or the dealer where you bought your Plasma Display to install it.

Our company is not responsible for any damage that may occur as a result of defective installation, wrong use or remodeling of your Plasma Display. This includes damage caused by natural disasters or the like.

To the dealer:

After completing the installation of the Plasma Display, hand these "OPERATING INSTRUCTIONS" to your customer and explain how to use the unit.

IMPORTANT



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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SAFETY PRECAUTIONS

WARNING: TO PREVENT FIRE OR SHOCK HAZARD,
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure place. This is for your security.

The following symbols are found on labels attached to the product. They alert the operators and service personnel of this equipment to any potentially dangerous conditions.

WARNING

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.

CAUTION

This symbol refers to a hazard or unsafe practice which can result in personal injury or property damage.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

CAUTION: This product satisfies FCC regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances such as radios and televisions, use shielded cables and connectors for connections.

[For Canadian model]

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

IMPORTANT SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the product is operated.

RETAIN INSTRUCTIONS — The safety and operating instructions should be retained for future reference.

HEED WARNINGS — All warnings on the product and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.

CLEANING — Unplug this product from the wall outlet before cleaning. The product should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzene, insecticides or other volatile liquids since they may corrode the cabinet.

ATTACHMENTS — Do not use attachments not recommended by the product manufacturer as they may cause hazards.

WATER AND MOISTURE — Do not use this product near water — for example, near a bathtub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.

ACCESSORIES — Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

CART — A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.



VENTILATION — Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

POWER SOURCES — This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.

LOCATION — The appliance should be installed in a stable location.

NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

GROUNDING OR POLARIZATION

- If this product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other), it will fit into the outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- If this product is equipped with a three-wire grounding type plug, a plug having a third (grounding) pin, it will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

OUTDOOR ANTENNA GROUNDING — If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.

LIGHTNING — For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

POWER LINES — An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

OVERLOADING — Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

OBJECT AND LIQUID ENTRY — Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

SERVICING — Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

DAMAGE REQUIRING SERVICE — Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance — this indicates a need for service.

REPLACEMENT PARTS — When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

SAFETY CHECK — Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

WALL OR CEILING MOUNTING — The product should not be mounted to a wall or ceiling.

HEAT — The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

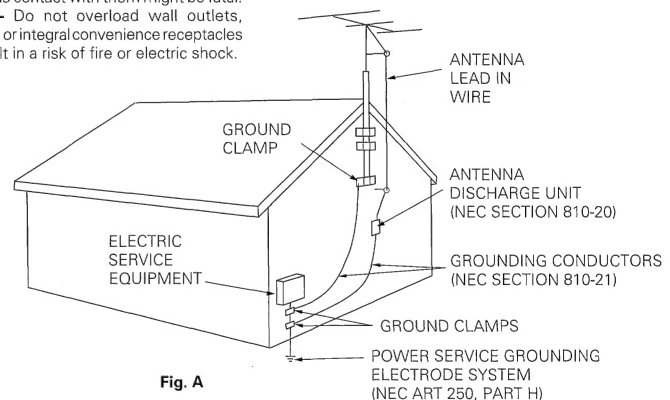


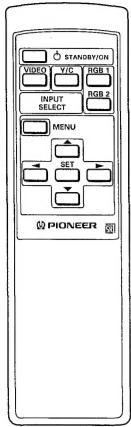
Fig. A

NEC — NATIONAL ELECTRICAL CODE

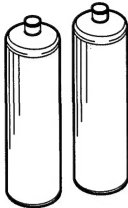
SUPPLIED ACCESSORIES

Tick ☒ the box of accessories to confirm they have been properly provided.

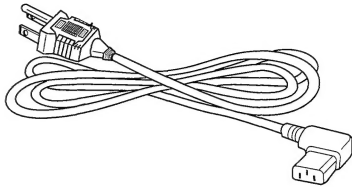
☐ Remote control unit



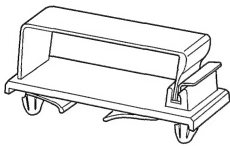
☐ Two AA batteries



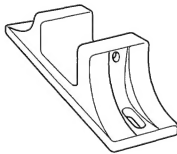
☐ Power cord



☐ Three cable clamps



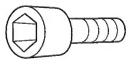
☐ Two stands



☐ Two washers



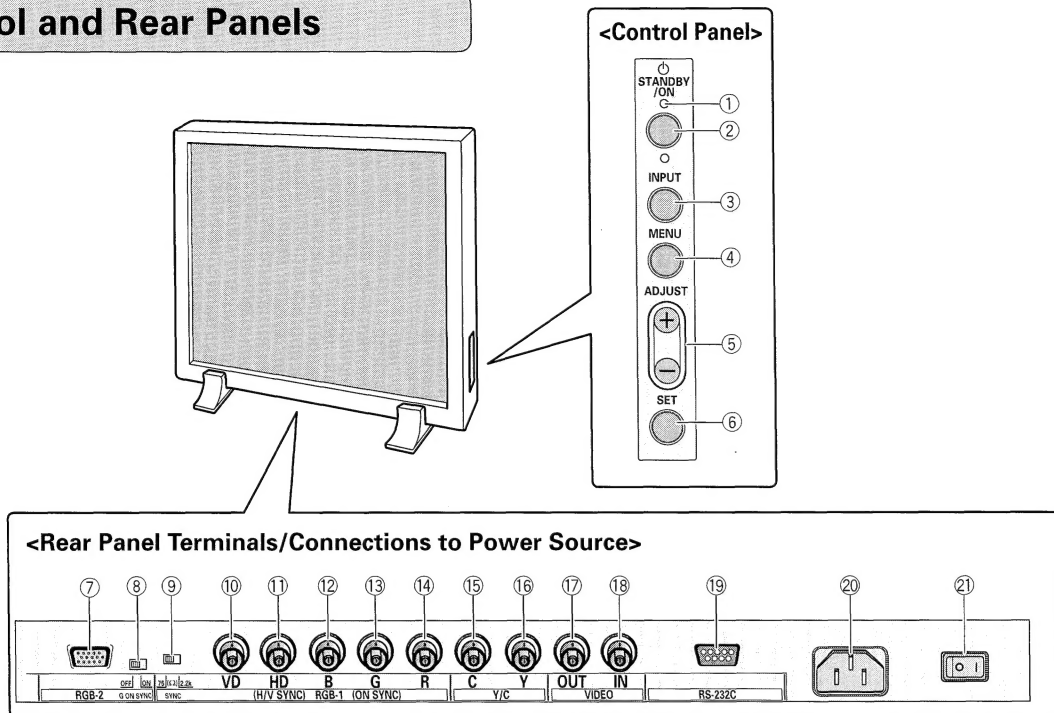
☐ Two bolts



☐ Operating Instructions

PANEL FEATURES AND FUNCTIONS

Control and Rear Panels



BEFORE USING YOUR
PLASMA DISPLAY

<Control Panel>

- ① **STANDBY/ON indicator**
The indicator is red when in standby mode and turns green when the power to the display is turned on.
- ② **POWER button**
Press to turn the power to the display on and off.
- ③ **INPUT button**
Press to switch the various input functions.
- ④ **MENU button**
Press to enter the menu screen and exit from it.
- ⑤ **ADJUST button**
Use the +/- buttons to adjust picture quality.
- ⑥ **SET button**
Press to finalize menu selections when adjusting picture quality.

RGB-1 input terminals

- ⑨ **Sync Signal Input Impedance switch (75 Ω / 2.2 k Ω)**
- ⑩ **Vertical Sync Signal Input terminal: (75 Ω /2.2 k Ω , switchable with the Sync Signal Input Impedance switch)**
- ⑪ **Horizontal or Composite Sync Signal Input terminal: (75 Ω /2.2 k Ω , switchable with the Sync Signal Input Impedance switch)**
- ⑫ **Blue Signal Input terminal: 75 Ω**
- ⑬ **Green or Green with Sync Signal Input terminal (ON SYNC): 75 Ω**
- ⑭ **Red Signal Input terminal: 75 Ω**

Y/C input terminals

- ⑮ **Color Signal Input terminal: 75 Ω**
- ⑯ **Luminance Signal Input terminal: 75 Ω**

VIDEO input/output terminals

- ⑰ **Video Output terminal: 75 Ω**
- ⑱ **Video Input terminal: 75 Ω**
- ⑲ **Control Signal Input terminal (RS-232C)**
- ⑳ **AC inlet**
- ㉑ **POWER switch**
Use to -turn the power off from the display when it will not be operated for a long time.

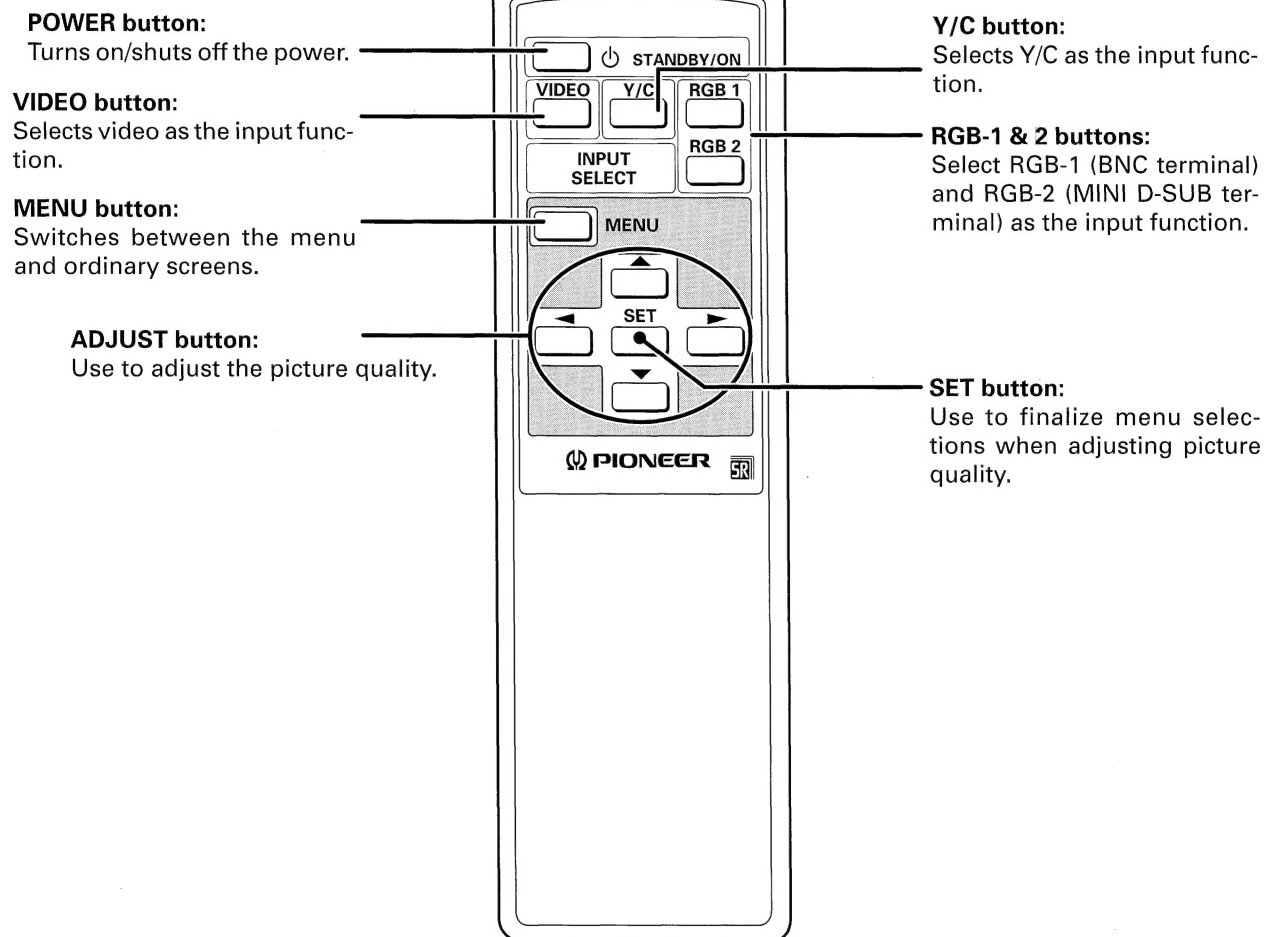
<Rear Panel Terminals/Connections to Power Source>

RGB-2 input terminals

- ⑦ **MINI D-SUB 15-pin terminal**
- ⑧ **G on Sync mode selection switch (ON/OFF)**
If the images become greenish when an external device is connected to the RGB-2 input terminal, turn ON the G on SYNC mode. Normally set to OFF.

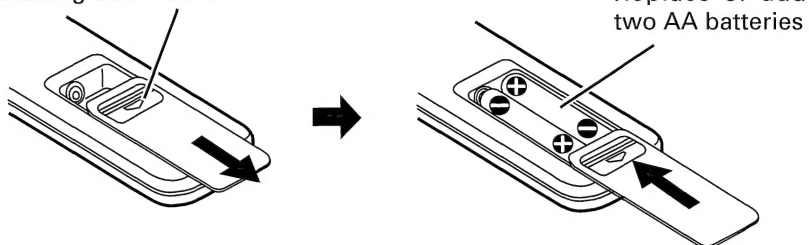
PANEL FEATURES AND FUNCTIONS

Remote Control Unit



Putting Batteries in the Remote Control Unit

To add or change the batteries, slide the cover of the battery compartment on the back of the remote control unit towards you while pushing down on it.



How to care for the remote control unit:

- Do not drop the remote control unit.
- Do not get the remote control unit wet.
- Do not use or store the remote control unit in the following locations:
 - In a place subject to direct sunlight
 - In a place subject to heat radiated by a heating system
 - In a humid place

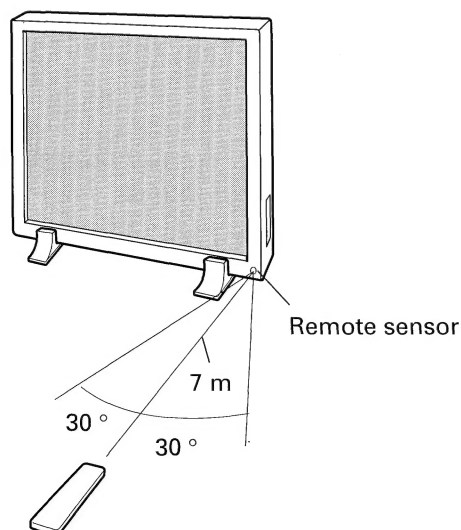
⚠ CAUTION

- Never mix new and used batteries.
- Do not use different brands of batteries. Batteries of the same size may have different voltage.
- When the unit will not be used for a long time (more than one month), remove the batteries to prevent liquid leakage inside the battery case. If leakage occurs, wipe up the liquid from the case and replace the batteries with new ones.
- Do not charge, short-circuit, break down or expose the batteries provided with the display to flames.

BEFORE USING YOUR
PLASMA DISPLAY

Remote Control Operation range

- If there is an obstacle between the remote control unit and the display, the unit may not operate with the remote control unit.
In this case, move the obstacle or change your position.
- As the battery power is weakens, the remote control operation range becomes shorter. If the operation range becomes too short, replace the batteries.



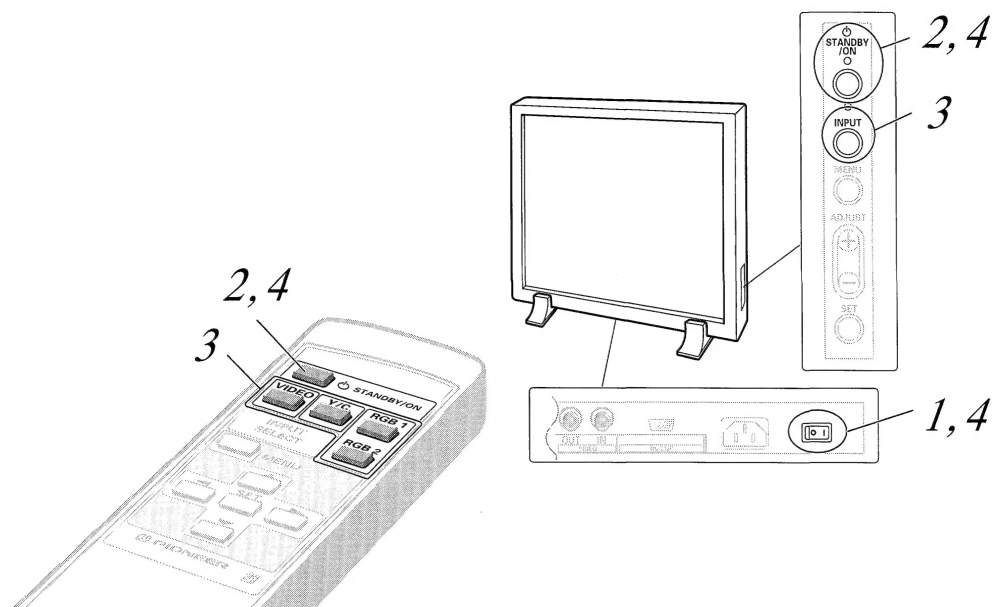
NOTES :

The Plasma Display discharges weak infrared rays from the screen. When devices operated by infrared remote control units such as VCRs are installed near the Plasma Display, it may be difficult for the devices to receive signals from the remote control unit, or they may not be able to receive the signals at all.

Depending on the installation environment, the Plasma Display may not be able to receive signals from the remote control unit or the operating distance of the remote control unit may shorten due to effects of the infrared rays discharged from the Plasma Display.

The intensity of the infrared rays discharged from the screen changes according to the image displayed.

VIEWING IMAGES ON YOUR PLASMA DISPLAY

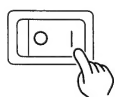


1

Input the power to the main unit.

NOTE :

The buttons on the main unit and remote control unit, and the external control commands are not accepted by the display unit while the standby indicator is flashing in red.



The standby indicator will flash in red for about 4 seconds. The display then enters standby state and the indicator remains lit.

2

Turn on the Display.

Remote control



STANDBY/ON

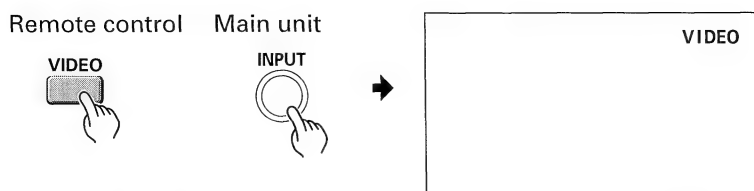
Main unit



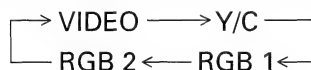
The STANDBY indicator turns green.

3

Select an input source.



- Press the INPUT switching button on the main unit : each time press changes the input source as follows:



- To choose an input source with the remote control, press the INPUT SELECT button.
- The function cannot be switched at the MENU screen.

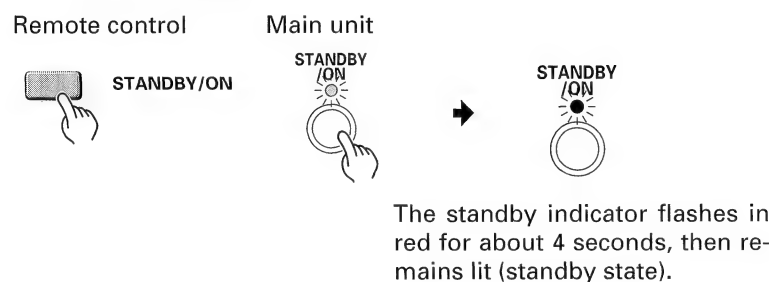
"NO SYNC!" is displayed if no signal is being input when RGB1 or RGB2 is selected.

"OUT OF RANGE" is displayed if the signal being input cannot be processed on this set.

4

After use, turn off the power.

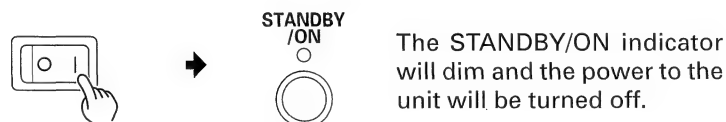
- ① Turn off the power.



NOTE :

The buttons on the main unit and remote control are not accepted by the display while the standby indicator is flashing in red.

- ② Turn off the MAIN POWER switch on the main unit.

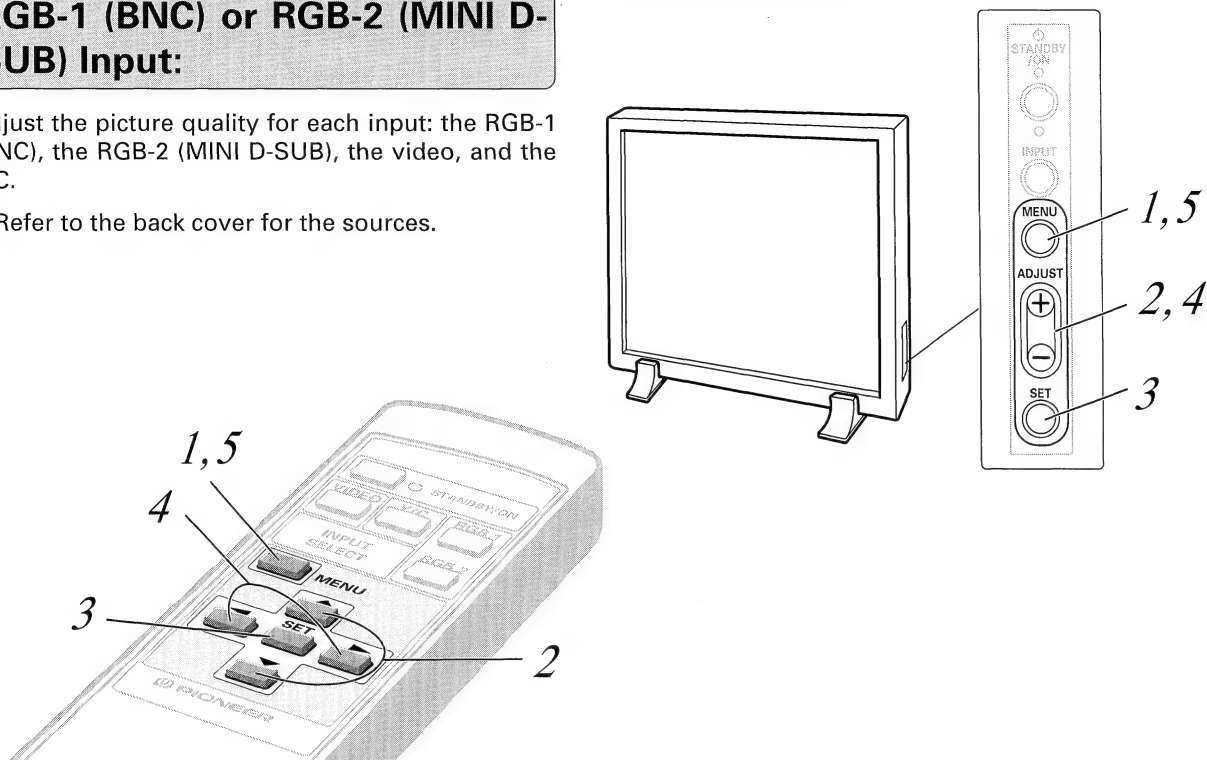


HOW TO ADJUST PICTURE QUALITY

RGB-1 (BNC) or RGB-2 (MINI D-SUB) Input:

Adjust the picture quality for each input: the RGB-1 (BNC), the RGB-2 (MINI D-SUB), the video, and the Y/C.

* Refer to the back cover for the sources.



1

Switch to the MENU screen.

Remote control Main unit



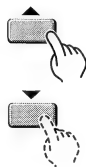
✓ PICTURE PARAMETER	
CONTRAST	
BRIGHT.	
CLK. FRQ.	+ 10
CLK. PHS.	- 5
HOR. POS.	0
VER. POS.	+ 8
INIT.	
SET : SEL. MENU : EXIT	

The currently selected item will be displayed in purple.

2

Choose the item to be adjusted.

Remote control Main unit



✓ PICTURE PARAMETER	
CONTRAST	
BRIGHT.	
CLK. FRQ.	+ 10
CLK. PHS.	- 5
HOR. POS.	0
VER. POS.	+ 8
INIT.	
SET : SEL. MENU : EXIT	

The currently selected item will be displayed in purple.

3

Finalize your choice.

Remote control Main unit



✓ PICTURE PARAMETER	
CONTRAST	
◀ ▶ : ADJ.	SET : EXIT

Make adjustment concerning each item as follows:

CONTRAST .. Adjusts the contrast of the picture according to the brightness of the environment so that you can watch the picture easier.

BRIGHT Adjusts the brightness of the picture so that you can watch the darker parts of the picture easier.

CLK.FRQ. When part of the letters in the picture is missing, or if the displayed image is distorted as a rainbow-like noise, use this function. This function is to adjust the frequency of the internal clock signal for the video signal input.

NOTE:

HOR.POS may need to be adjusted in some cases if CLK.FRQ has been adjusted.

CLK.PHS. When some letters in the picture flicker and the color becomes distorted, use this function. Adjust it to minimize the flicker and the color distortion. This function is to adjust the phase of the internal clock signal, which is adjusted with the CLK. FRQ function.

HOR.POS. Adjust the horizontal position of the picture.
(-32 to +32)

VER.POS. Adjust the vertical position of the picture.
(-32 to +32)

INIT. Returns the above picture settings to their center values. *1

NOTE:

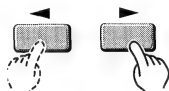
When the interlaced signals such as NTSC signals is applied from the RGB input terminal, adjust the HOR. POS. and VER. POS. (horizontal and vertical positions) so that the image becomes positioned in the center of the screen. The picture may not be reproduced properly if the positions are altered extremely from the original ones.

4

Adjust the picture quality concerning the selected item.

Remote control

Main unit



In case of CONTRAST and BRIGHT:

☒ PICTURE PARAMETER

CONTRAST
|||||

◀ ▶: ADJ.
SET: EXIT

In case of CLK.FRQ., CLK.PHS., HOR.POS. and VER.POS.:

☒ PICTURE PARAMETER

CLK. FRQ.
+ 10

◀ ▶: ADJ.
SET: EXIT

To return to the step-2 screen, press the SET button.
Repeat steps 2 through 4 to adjust the other items.

5

When you have completed the setting, return to the normal screen.

Remote control

Main unit



Return to the normal screen.

*1

When you select **INIT.**, the message on the right is displayed. Select "YES" or "NO" by using the ◀ or ▶ button.

Selecting "YES" and pressing the SET button sets back all picture quality settings to their default values.

When "NO" is selected, all settings will remain as they are.

☒ PICTURE PARAMETER

INITIALIZE?

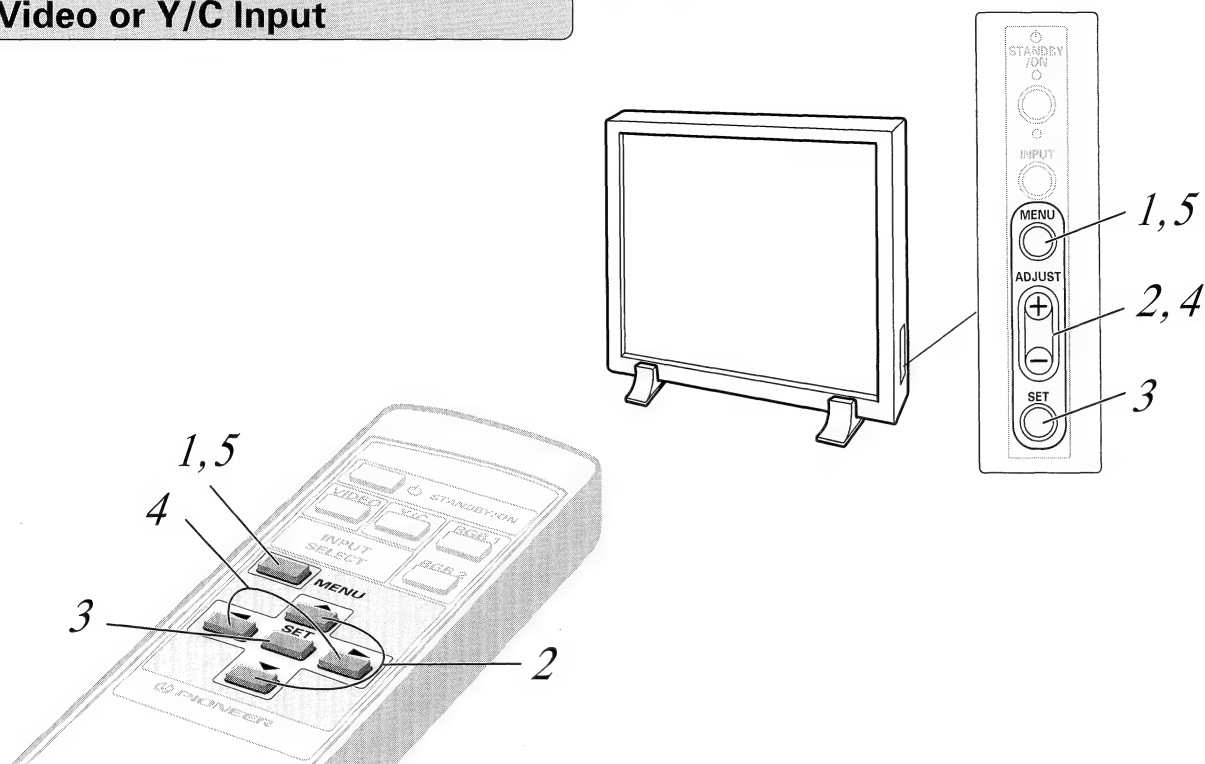
YES ◀ ▶ NO

SET: EXIT

If "NO" has been selected, SET:EXIT will be displayed here.
If "YES" has been selected, SET:INIT will be displayed.

HOW TO ADJUST PICTURE QUALITY

Video or Y/C Input



1

Switch to the MENU screen.

Remote control



Main unit



✓ PICTURE PARAMETER	
CONTRAST	
BRIGHT.	
COLOR	
TINT	
SHARPNESS	
INIT.	
SET : SEL. MENU : EXIT	

The currently selected item will be displayed in purple.

2

Choose the item to be adjusted.

Remote control



Main unit



✓ PICTURE PARAMETER	
CONTRAST	
BRIGHT.	
COLOR	
TINT	
SHARPNESS	
INIT.	
SET : SEL. MENU : EXIT	

The currently selected item will be displayed in purple.

3

Finalize your choice.

Remote control



Main unit



✓ PICTURE PARAMETER	
CONTRAST	
◀ ▶ : ADJ.	SET : EXIT

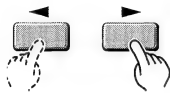
Make adjustments for each item as follows:

- CONTRAST** ... Adjusts the contrast of the picture according to the brightness of the environment so that you can watch the picture easier.
- BRIGHT** Adjusts the brightness of the picture so that you can watch the darker parts of the picture, (such as night scenes and dark hair), easier.
- COLOR** Adjusts the color of the picture as desired. (Set it to a little lower position than that you want, to obtain natural pictures.)
- TINT** Adjusts the tint of the picture so that the face color looks natural.
- SHARPNESS** . Normally set to their center values. But if you want images to be displayed in softer tones, adjust it to the left from the center position.
- INIT** Returns the above picture settings to their center values. *1

4

Adjust the picture quality concerning the selected item.

Remote control



Main unit



In case of the items other than TINT:

☒ PICTURE PARAMETER

 CONTRAST |||||
 ◀ ▶ : ADJ. SET : EXIT

In case of TINT:

☒ PICTURE PARAMETER

 TINT
 ◀ ▶ : ADJ. SET : EXIT

To return to the step-2 screen, press the SET button.
Repeat Steps 2 through 4 to adjust the other items.

5

When you have completed the setting, return to the normal screen.

Remote control



Main unit



➔ Returns to the normal screen.

*1

When you select **INIT**, the message on the right is displayed. Select "YES" nor "NO" by using the ◀ or ▶ button.

Selecting "YES" and pressing the SET button sets back all picture quality settings to their default values.

When "NO" is selected, all settings will remain as they are.

☒ PICTURE PARAMETER

 INITIALIZE?
 YES ▶ NO
 SET : EXIT

If "NO" has been selected, SET:EXIT will be displayed here.
If "YES" has been selected, SET:INIT will be displayed.

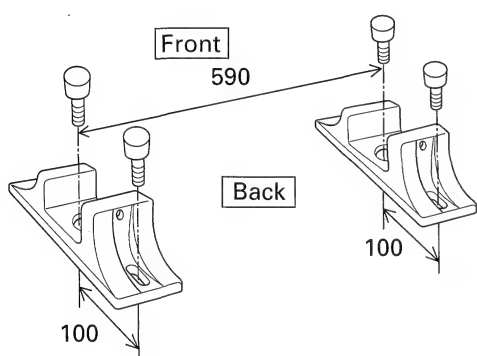
INSTALLATION

Using the Display with Stands

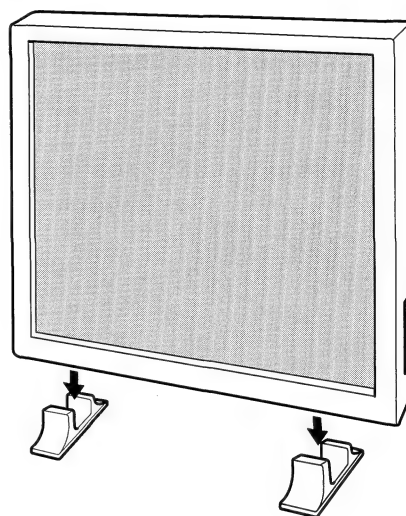
Always be sure to have your display installed by a trained professional or by your dealer.

To use the stands provided with the main unit, fit the main unit with them in accordance with the following procedure:

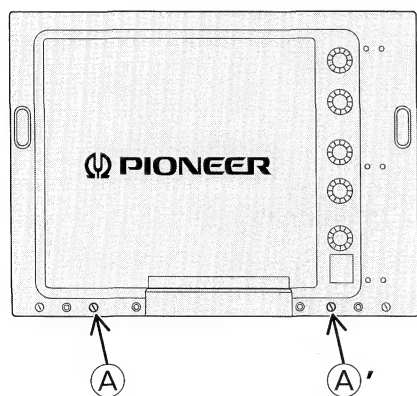
- 1. Use four bolts to fix the stands provided with the display on the display stand.**



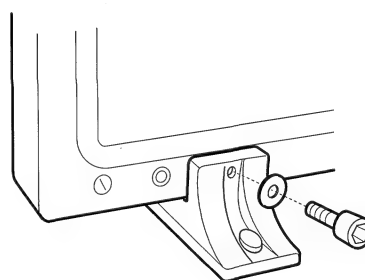
- 3. Insert the main unit into the stands.**



- 2. Use a coin to remove hole rivets (A) and (A').**



- 4. Fix the main unit with the washers and bolts.**



Use a hexagonal wrench.
(6 mm)

▲ CAUTION

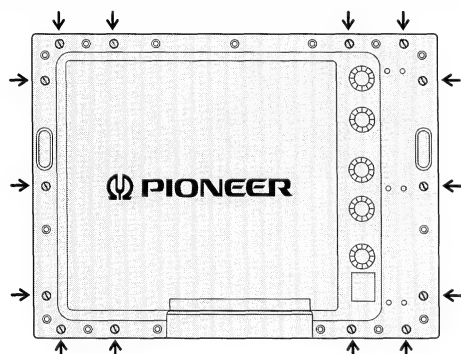
Because this display has an extremely small footprint for its heavy weight of 30.8 kilograms, it is very unstable. Always be sure to work together with another person when unpacking, carrying, or installing the display.

Installing the Display on a wall or Other Flat Surfaces

The display comes with bolt holes for attaching to a wall or other flat surface.

1. How to install by using separately-sold fittings from Pioneer

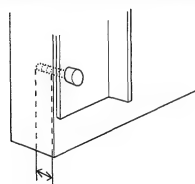
Remove the hole rivets in the holes designed for use in installing the display to use the separately sold fittings (i.e., those holes indicated by arrows in the diagram below) and attach the display to a wall.



When installing fittings or installing the display, always be sure to have the work done by a trained professional or by your dealer.

2. How to install by using any other fittings than those sold separately :

- Use bolts (M8) which is to be left by 13 to 20 mm inside the unit when fastened. Using bolts which are longer than 20 mm may damage the unit. For installation positions, contact your nearest Pioneer authorized service station.



13 to 20 mm

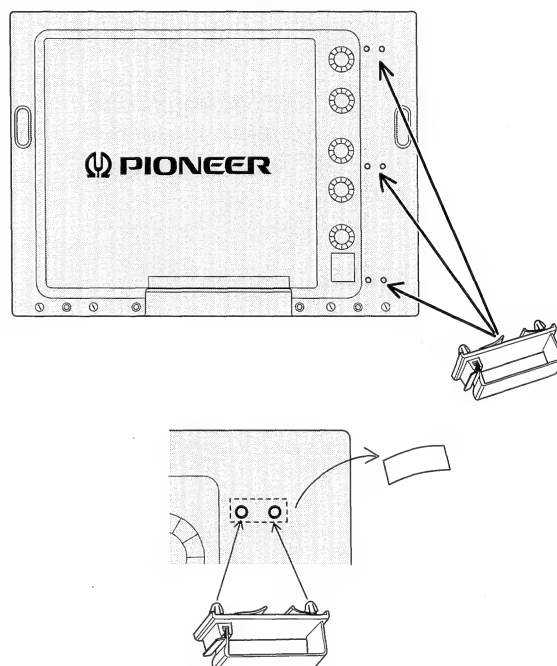
It is recommended that you use Pioneer products for the bolts and other metal fittings to install your display. Pioneer will not be liable for any problems in installation or for any accidents or damage resulting from the use of bolts or fittings not provided by Pioneer.

How to Fit the Display with Cable Clamps

Two cable clamps are provided to bind the connecting cables.

Follow the procedure below to attach the clamps to the display.

<Back of the main unit>



Remove the label on the rear of the display, insert the cable clamp into the two holes shown in the diagram above, and press firmly until you hear a clicking sound.

▲ CAUTION

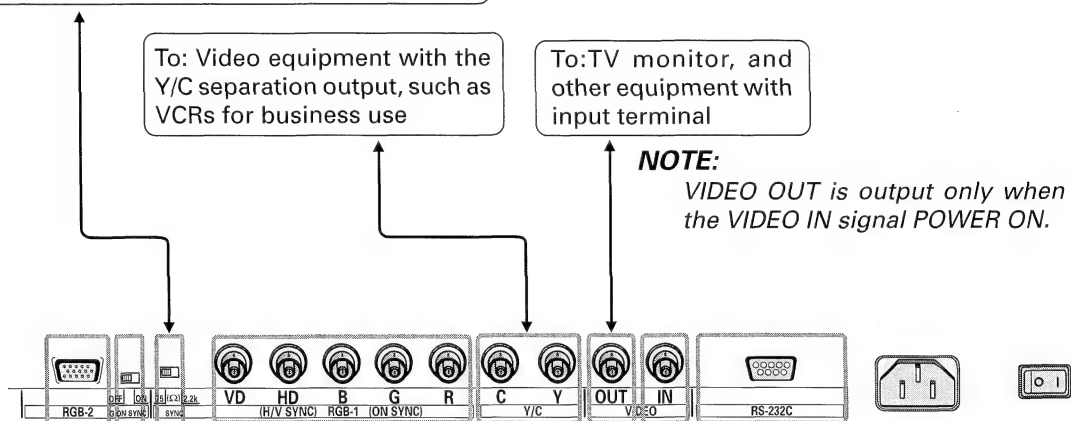
When using the cable clamps provided with your display, always be sure to remove the label covering the holes into which the clamp is to be fitted before inserting the clamp into place.

Note that inserting cables into the cable clamp may prevent proper ventilation, and that when using the cable clamp you should therefore be sure to keep the display a distance of 10 centimeters or more away from any walls or other surfaces.

CONNECTIONS

Diagram of Equipment connected

Switch this according to the output impedance of the sync signal of the device connected when inputting to RGB1.
Set to 2.2 k Ω when the output impedance of the sync signal of the device is other than 75 Ω .



NOTE:

VIDEO OUT is output only when the VIDEO IN signal POWER ON.

To: Personal computers

To: Personal computers, external RGB decoders, or other devices with RGB output ports

To: VCRs, video cameras, laser disc players, DVD players, or other devices with video OUTPUT ports

To: Personal computers, when controlling the Plasma Display with the personal computer.

* In case of a 25-pin RS-232C connector, use a conversion connector available on your local market.

If the images become greenish when an external device is connected to the RGB-2 input terminal, turn ON the G on SYNC mode. Normally set to OFF.

* Refer to the back cover for the sources.

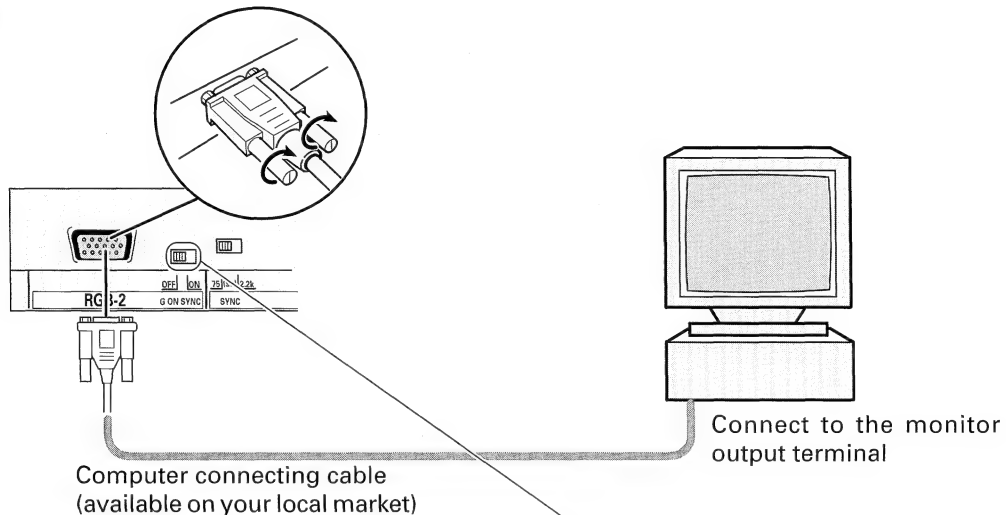
Connecting a Personal Computer to the Display

The method of connecting a personal computer to the unit varies with the type of computer. Before connecting the computer, read the instruction manual for the computer also.

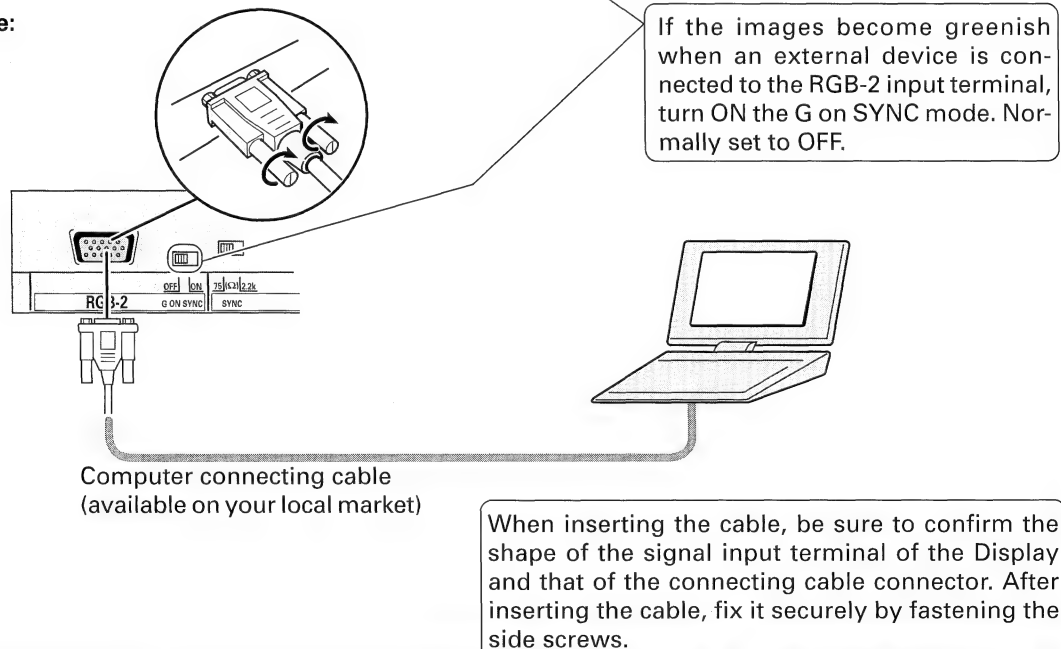
■ In case of an IBM personal computer or A/T compatible machines :

You can use your Plasma Display together with the computer only in the VGA mode.
(640 dots × 480 lines / Horizontal scanning frequency: 31.47 kHz / Vertical scanning frequency: 59.94 Hz)

• Desk-top type:



• Notebook type:



NOTES :

- Notebook-type personal computers with a built-in LCD panel of VGA display type may have an external RGB output which is non-VGA. In this case, images are not reproduced on the main unit. The external RGB output should be set to the VGA mode.
- Depending on the model of the computer to be connected, a conversion connector and an analog RGB output adapter, etc., which are attached to the computer or sold separately, are needed to connect the cord to the computer. For details, refer to your nearest dealer.

CONNECTIONS

■ In case of a Macintosh®, a computer from the NEC PC-9800® series, or a machine compatible with one of these computers:

Macintosh®: You can use your Plasma Display together with the computer in the 13-inch mode:

(640 dots x 480 lines / Horizontal scanning frequency: 35.00 kHz / Vertical scanning frequency: 66.67 Hz)

PC-9800®: Normal Mode:

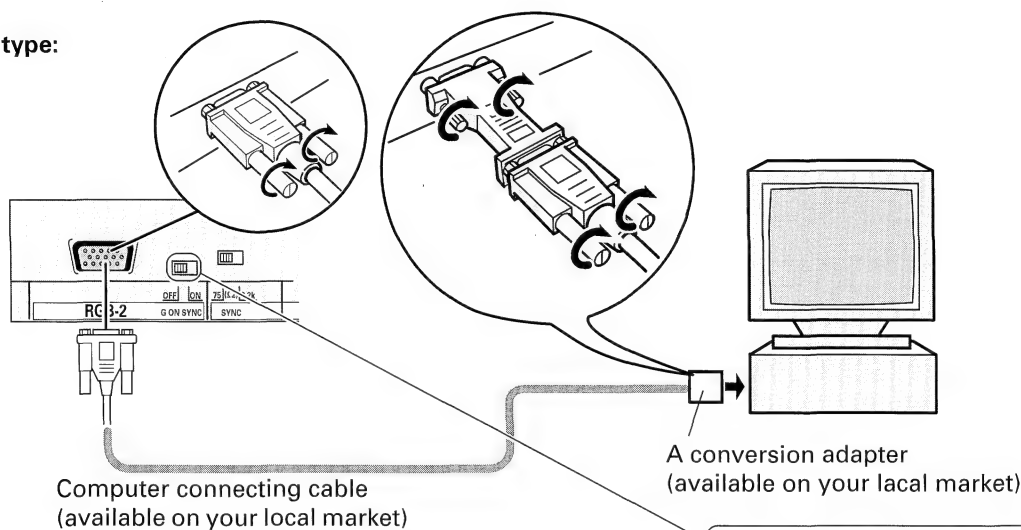
(640 dots x 400 lines/horizontal scanning frequency 24.83 kHz/vertical scanning frequency 56.42 Hz, or 640 dots x 400 lines/horizontal scanning frequency 31.5 kHz/vertical scanning frequency 70 Hz)

DOS/V or Windows VGA mode:

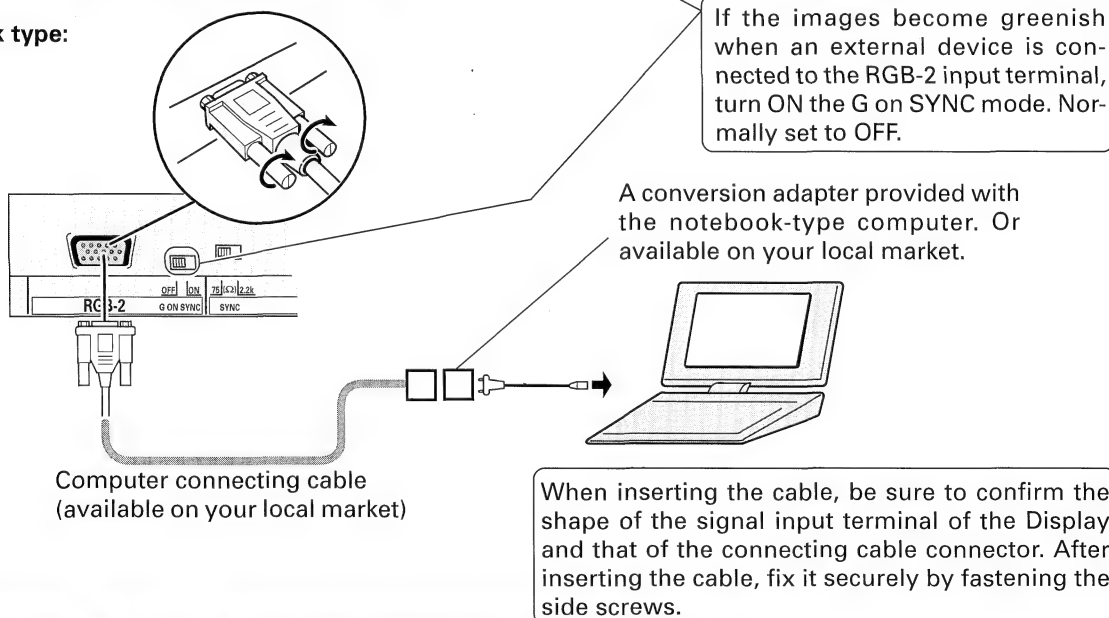
(640 dots x 480 lines/horizontal scanning frequency 31.47 kHz/vertical scanning frequency 59.94 Hz)

- This may not be applicable for some models. Refer to the instruction manual for the computer used for details.

• Desk-top type:



• Notebook type:

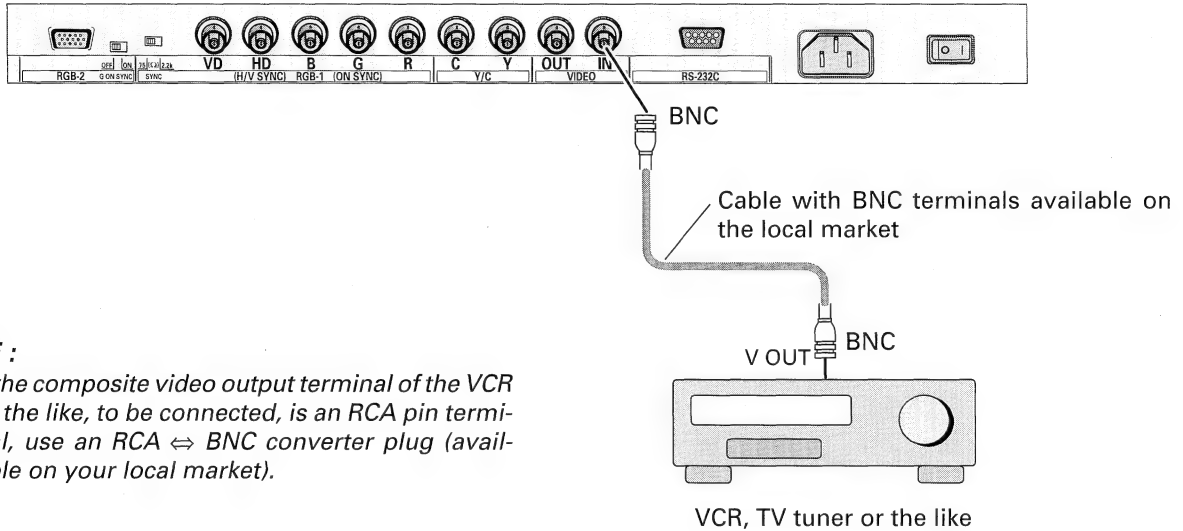


NOTES :

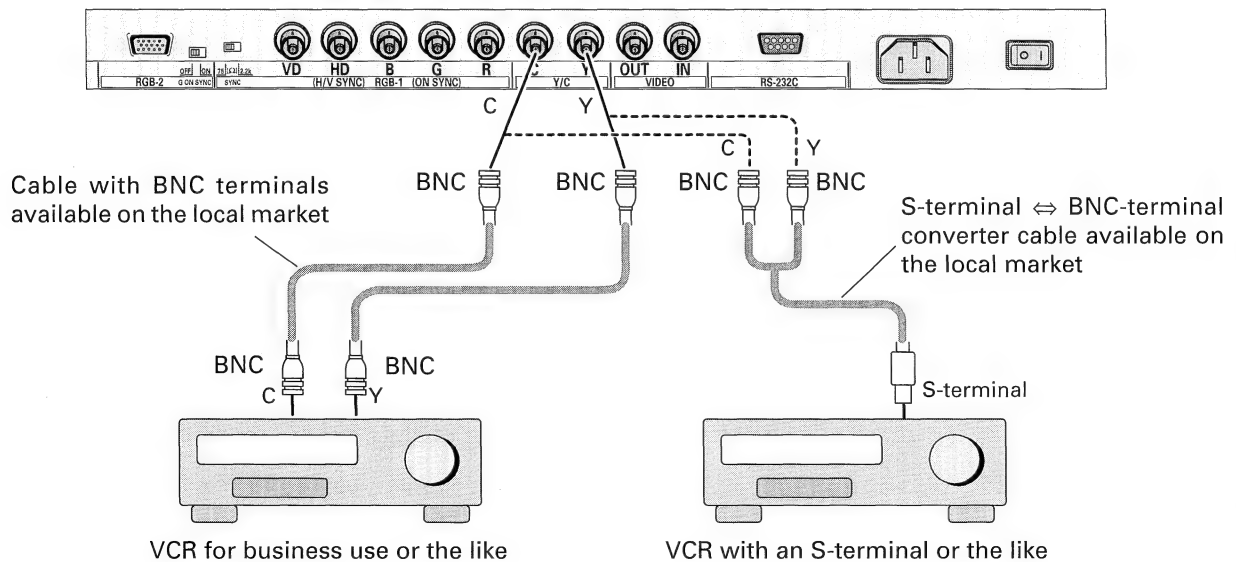
- Notebook-type personal computers with a built-in LCD panel of VGA display type may have an external RGB output which is non-VGA. In this case, images are not reproduced on the main unit. The external RGB output should be set to the VGA mode.
- The computer manufacturers, product names, etc. appearing in this manual are the trademarks or registered trademarks of the respective companies.
- Some Macintosh models output both the G-on-SYNC and composite SYNC signals, which causes the screen to become greenish. In this case, turn ON the G on SYNC mode switch. Normally be sure to use set to OFF.

Connecting Video Devices to the Display

1. In case of a composite video source, such as a VCR or TV tuner:



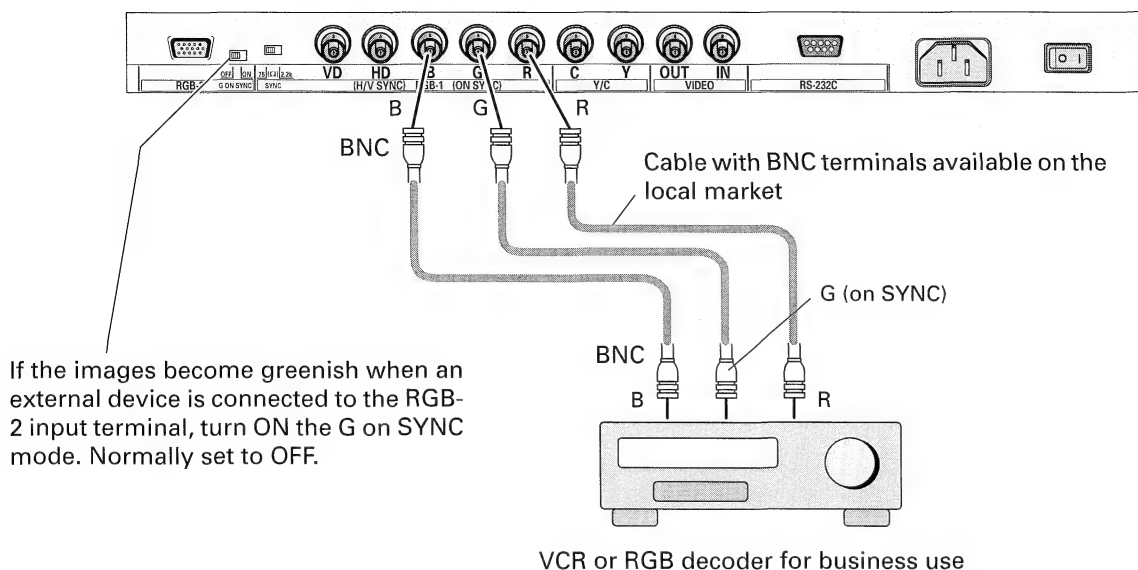
2. In case of a device with the Y/C separation output



CONNECTIONS

3. In case of G-on-SYNC RGB analog source devices

(How to connect the display to a device which provides green-signal output with the synchronizing signal)

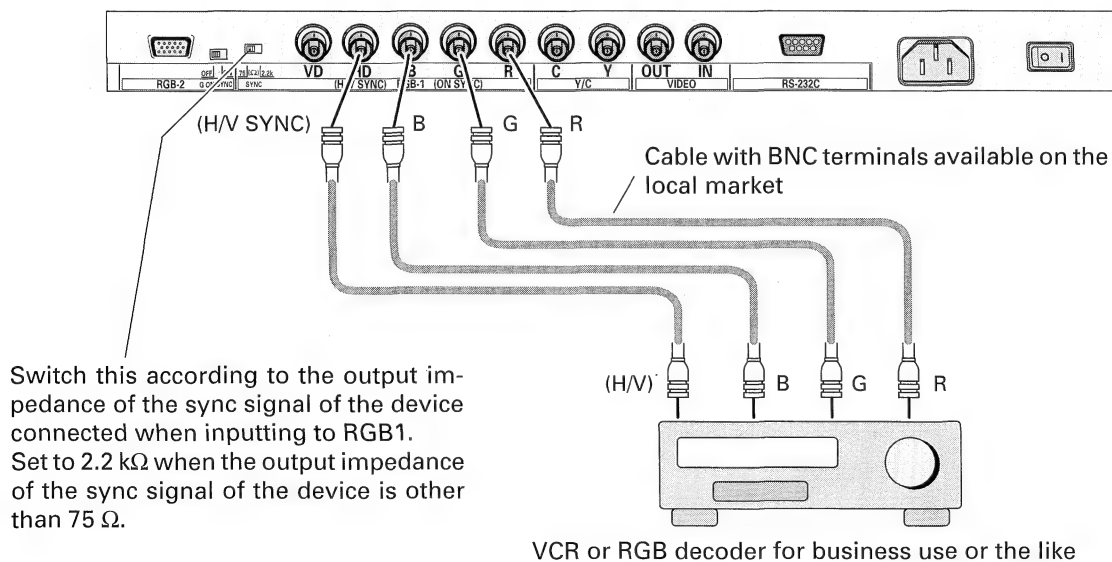


NOTE :

If you use your Plasma Display in this way, don't connect any device to its VD or HD terminal. Otherwise images may not properly be reproduced.

4. In case of composite-sync RGB analog source devices

(How to connect the display to a device which provides horizontal and vertical synchronizing signals)

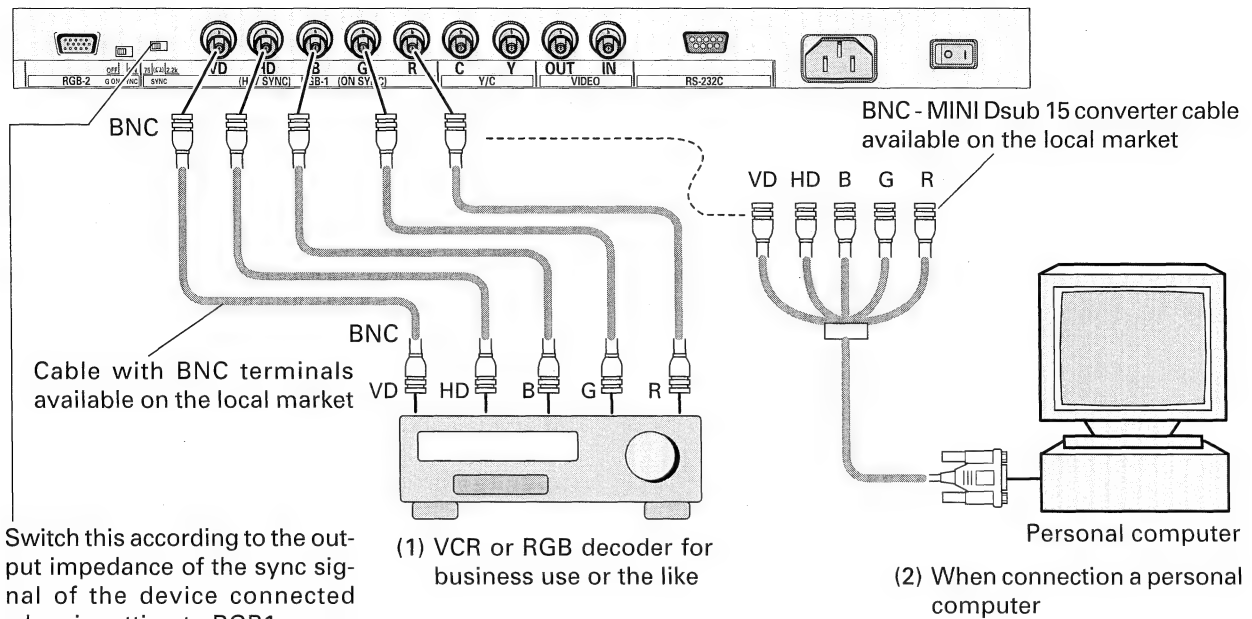


NOTES :

- If you use your Plasma Display in this way, don't connect any device to its VD terminal. Otherwise images may not properly be reproduced.*
- Some Macintosh® models may output both the G on SYNC and composite SYNC. In such cases, the screen becomes greenish when composite SYNC is output. For such models, connect the G on SYNC of step 3.*

5. In the case of an RGB analog source with separate sync signals

(The RGB output has green, blue and red signals, and horizontal and vertical sync signals)



NOTE :

When you connect a personal computer as shown above, you may need an adapter depending on the type of the computer. For details, consult the personal computer manufacturer or the computer dealer.

NOTE : Amount of information displayed on the screen

1. NTSC video sources

Due to the addition of the copy guard signals to some NTSC video signals (rental video tapes and DVDs, etc.) and editing and processing in video production, many video tapes will have image distortion, etc. at the edges of the images. Consequently, the image area is limited when NTSC video signals are displayed, resulting in a narrow display area compared to the VGA. Therefore, the screen is masked at the top and bottom when displayed in the NTSC.

2. Video signals from NEC PC-9800 series computers

As the PC-9800 series normal mode only has capacity for (640 x 400) information, images are displayed with 80 lines less.

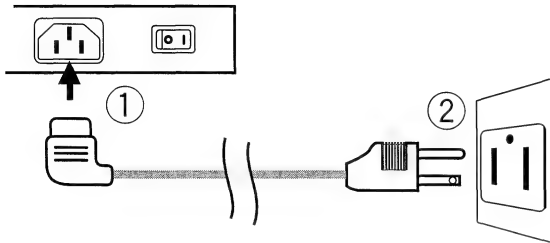
NOTE :

To protect the internal circuit, the video signal is muted according to the signal input. Especially when special VTR playback (fast forward, rewind) signals are input to the RGB input, or when copy guard signals or signals with severe drop in picture quality are input, no images may be displayed. In such cases, use the video input or Y/C input.

CONNECTIONS

Connecting the Power Cord

After you have completed connecting all necessary equipment with your Plasma Display, connect the power cord of the Display to the AC outlet.



Do not use voltages outside the power supply voltage range indicated (AC 100 to 120 V) or fire and electrical hazards may result.

⚠ CAUTION

- Always use the power cord provided with the unit.

⚠ CAUTION

- For the Plasma Display, a three-core power cord with a ground terminal is used for safety. Always be sure to connect the power cord to a three-pronged outlet and make sure that the cord is properly grounded. If you use a power source converter plug, use an outlet with a ground terminal and screw down the ground line.

- ① Connect the power cord to the Display.
- ② Insert the power plug into an AC outlet on the wall.

Maintenance

- Before beginning maintenance, be sure to disconnect the power plug from the outlet.
- **Maintenance of cabinet/remote control unit**
Never use benzine, thinner or other solvents, or the cabinet and remote controller may degrade and the paint peel off.
Wipe gently with a soft cloth.
When very dirty, wet a soft cloth with neutral detergent diluted with water, squeeze it firmly, wipe with it, and then wipe with a dry soft cloth.
- **Maintenance of Display (Front protective panel)**
After ducting, wipe gently with a soft cloth.
Do not wipe with tissue or hard cloth.
As the surface scratches easily, do not rub or beat with hard object.
Never use solvents such as benzine and thinner to clean the panel as it may lose its transparency or change color.
- **Maintenance of vents**
Clean vents on the side and the rear of the main unit and on the fan mounting section once a month with a vacuum cleaner set to "Weak." The maintenance must be performed with the main power switch of the main unit turned off. If the unit is used with dust accumulated, the internal temperature may rise inside the unit to cause equipment failure or a fire.

About After-Sales Service

Should this product require service in the U.S.A. and you wish to locate the nearest Pioneer Authorized Independent Service Company, or if you wish to purchase replacement parts, operating instructions, service manuals, or accessories, please call the number shown below.

1-800-872-4159

Please do not ship your product to Pioneer without first calling the Customer Service Department at the above listed number for assistance.

PIONEER ELECTRONICS SERVICE, INC.
CUSTOMER SUPPORT DIVISION
P.O. BOX 1760, LONG BEACH,
CA 90801-1760, U.S.A.

For warranty information please see the Limited Warranty sheet included with your product.

CAUTION: Panel sticking and after-image lag

- Displaying the same images such as still images for a long time may cause after-image lagging. This may occur in the following two cases.
 1. After-image lagging due to remaining electrical load
When image patterns with very high peak luminance are displayed for more than 1 minute, after-image lagging may occur due to the remaining electric load. The after-images remaining on the screen will disappear when moving images are displayed. The time for the after-images to disappear depends on the luminance of the still images and the time they had been displayed.
 2. After-image lagging due to sticking
When images of the same pattern are displayed continuously for several hours or displayed for a short period of time every day, after-images may remain on the screen due to the sticking of the fluorescent materials. In this case, these images may decrease if moving images are displayed after them, but basically they will not disappear.
- Avoid displaying the same images continuously over a long period of time with the Plasma Display.

Troubleshooting

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Inspect the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Condition	Possible Cause	Measure	Reference Page(s)
The power of the Display cannot be turned on.	<ul style="list-style-type: none"> The power plug is not inserted into the outlet. 	<ul style="list-style-type: none"> Insert the power plug into the outlet. 	24
The power is shut off automatically	<ul style="list-style-type: none"> The temperature inside the Display has become too high (because ventilation holes have been covered). 	<ul style="list-style-type: none"> Remove obstacles covering the ventilation holes. 	
No image appears on the screen.	<ul style="list-style-type: none"> You have switched to a wrong input. You have not correctly connected the other necessary equipment to the Display. You have not correctly adjusted the picture/picture quality. The input signals are not acceptable for the unit. The G on SYNC mode switch is set to ON although the G on SYNC signal is not input to RGB 2. 	<ul style="list-style-type: none"> Switch to the correct input. Connect the other necessary equipment properly to the Display. Adjust correctly the picture/picture quality. Input signals which your Plasma Display can receive. Set the G on SYNC mode switch to OFF. 	11 18 to 24 12 to 15 18
The tint is not good; the colors are too dim/thin.	<ul style="list-style-type: none"> You have not properly adjusted the depth and tints of colors. 	<ul style="list-style-type: none"> Correctly adjust the depth and tints of colors. 	12 to 15
The remote control does not work.	<ul style="list-style-type: none"> The batteries are dead. There is some obstacle between the remote control and the remote control sensor. The remote control is outside its controllable range. Due to the infrared rays discharged from the screen. 	<ul style="list-style-type: none"> Replace the batteries. Remove the obstacle between the remote control and the remote control sensor. Operate the remote control within the controllable range. Do not place obstacles which may reflect the infrared rays near the Plasma Display. 	9 9 9 9
The picture is too dark. *	<ul style="list-style-type: none"> You have not correctly adjusted the picture/picture quality. 	<ul style="list-style-type: none"> Adjust the brightness and contrast of the picture correctly. 	12 to 15

* CAUTION

To prevent its panels and circuits, this unit reduces its luminance to 30% when the surrounding temperature exceeds 40°C, raises the rotational speed of the fan automatically to cool the insides. (The fan rotation sound will become louder.)

The starting temperature of the above protection operations differs according to the images displayed, ventilation conditions of the external environment, if dusts have accumulated in the vents of the Plasma Display, etc.

Use the Plasma Display in surrounding temperatures below 40°C.

CAUTION

To protect the panel drive circuit against unstable signal inputs, operations such as switching of inputs cannot be performed until the input becomes stable again.

Consequently, if an equipment connected to the unit outputs unstable signals, it may not be possible to perform operations using the remote controller and buttons on the unit. This can be solved by disconnecting the equipment outputting the unstable signal.

Conditions Apt to be Mistaken for Troubles:

Condition	Possible Cause
Letters are missing from the picture (for input from a computer).	<ul style="list-style-type: none"> Make adjustment using the CLK.PHS and CLK.FRQ. functions displayed in the MENU screen. <p>If the condition persists even after the adjustment, the letters may be other than those which can be displayed on the Plasma Display. Ascertain if they can be displayed on the Plasma Display by checking the screen of the computer.</p>
A creak-like noise is produced from the cabinet of the display.	<ul style="list-style-type: none"> As its ambient temperature changes, the cabinet slightly expands/shrinks and creaks. This is not a problem.
The screen is spotted; picture noises.	<ul style="list-style-type: none"> Due to electrical interference by discharge of the following: <ul style="list-style-type: none"> Apparatus with motors, such as a hair dryer, a vacuum cleaner, and an electric drill Apparatus with ignition, such as an automobile and a motorcycle Apparatus with switches, such as a thermostat Neon signs and frayed wires
The screen is striped.	<ul style="list-style-type: none"> Due to radio interference by TV stations, FM stations, amateur radio stations, simple radio stations, personal computers, TV sets, VCRs and audio equipment, etc.
You cannot operate your Plasma Display.	<ul style="list-style-type: none"> The display may not properly operate under external influence, such as lightning or static electricity. In this case, turn off the POWER switch and pull the power plug out of the outlet. Then, a few minutes later, insert the plug and turn on the POWER switch. Start operating your Plasma Display again.
Noise comes from the inside of the unit.	<ul style="list-style-type: none"> It is the fan noise. It is not a problem.
The computer image flickers.	<ul style="list-style-type: none"> Adjust the CLK.PHS, CLK.FRQ of the menu screen.
The RGB input image is greenish.	<ul style="list-style-type: none"> For the RGB1 input: Perform "Connection of the G on SYNC RGB analog source" on page 22. For RGB2 input: Set the G on Sync switch to ON.
The RGB2 input image cannot be displayed.	<ul style="list-style-type: none"> When the G on SYNC mode switch is set to ON although the G on SYNC signal is not input. Set the G on SYNC mode switch to OFF.

*** NOTE :**

This unit is manufactured by employing high precision technology. Note, however, that some picture elements, though a very small number, may be lost due to the effect of ambient temperature, etc., resulting in erroneous emission and other defects.

Other Precautions

- The unit is automatically turned off during operation and the standby indicator flashes in green under the following conditions :

- ① The ambient temperature exceeds 55 °C.
The display should be used at 40 °C or lower.
- ② The internal temperature of the unit is abnormally high due to blocking of ventilation ducts or abnormal heating of parts.

If the power supply switches automatically in other cases, malfunction may be suspected. Disconnect the power plug, and contact a Pioneer service center for repairs.

- This plasma display panel is very bright, and may tire the eyes when viewed for a long time near it. The recommended distance for viewing it is 3 to 6 m away.

Specifications

Luminescent panel 40-inch plasma display panel

Number of picture element
..... 640 × 480 (corresponding to VGA)

Input/output terminals:

RGB input

- ① BNC port RGB (75 Ω input only)
HD (H/V synchronization), VD (75 Ω/22 kΩ input switch)
- ② Mini Dsub 15P
Analog RGB, 0.7 Vp-p, 75 Ω input
Sync:
HD, VD 2.2 KΩ INPUT 2.0-5.0 Vp-p (positive/negative)

Video input 1-system BNC terminal 75 Ω input
Composite 1 Vp-p

Y/C input 2-system BNC terminal 75 Ω input

Control input Dsub 9P (RS-232C control)

VIDEO OUTPUT 1-system BNC terminal 75 Ω output

Corresponding sources

① Video units NTSC

② Computers

1. Resolution:

AT compatible units VGA (640 dots × 480 lines)
MAC 13-inch mode (640 dots × 480 lines)
PC-98 normal mode (640 dots × 400 lines)

2. Sync frequency:

AT compatible units 31.5 kHz (hor.), 60 Hz (ver.)
MAC 35 kHz (hor.), 67 Hz (ver.)
PC-98 24.8 kHz (hor.), 56 Hz (ver.)
31.5 kHz (hor.), 70 Hz (ver.)

The Plasma Display does not correspond to the interlaced mode of computers.

Some computers have two or more display modes, and some of these modes (though indicated above as those to which Plasma Display can correspond) cannot actually be displayed by the Plasma Display. For details, consult your nearest dealer.

Power AC 100 to 120 V, 50/60 Hz

Power consumption 350 W

External dimensions .. 916 (w) × 714 (h) × 88 (d) mm

Weight 30.8 kg

Allowable temperature of operation environment 0 °C to 40 °C

Allowable pressure range of operation environment 0.8 - 1.1 atmospheres

Accessories

Operating Instructions 1
Remote control unit 1
Dry cell battery (AA/R6) 2
Power cord 1
Cable clamp 3
Stands 2
Washer 2
Bolt 2

NOTE:

Specifications and design are subject to possible modifications without notice due to improvements.

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PIONEER ELECTRONICS OF CANADA, INC. 300 Allstate Parkway, Markham, Ontario L3R 0P2, Canada, TEL: (905) 479-4411
PIONEER HIGH FIDELTY TAIWAN CO., LTD. 13Fl. No.44 Chung Shan North Road Sec.2. Taipei TAIWAN, TEL: 886-2-521-3588